CLAIMS:

1. An imaging system (15a) arranged to reduce an artifact in a three-dimensional reconstructed volume comprising a plurality of planar images, said imaging system comprising

- image artifact reduction means (20) arranged to subsequently process said planar images (51) with a first corrective image (52) for eliminating a first source of structured noise (16) in said images and a second corrective image (54) for eliminating a second source of structured noise (14) in said images.

2. An imaging system (15a) according to Claim 1, wherein

- the first corrective image (52) comprises a first gain correction data (43);
- the second corrective image (54) comprises a second gain correction data (45).

3. An imaging system (15a) according to Claim 2, wherein:

- the first gain correction data (43) comprises a result of an averaging of a plurality of raw images of a gain calibration scan (41);
- the second gain correction data (45) comprises a result of an averaging of a plurality of raw images (41) of the gain calibration scan after them being processed by means of the first corrective image (52) and an unwarping function.

4. An imaging system (15a) according to any one of the preceding Claims, the image being acquired by means of an image intensifier (1d), wherein the first source of noise comprises a noise of an output screen (16) of the image intensifier and the second source of noise comprises a noise of an input screen (14) of the image intensifier.

5. An imaging system according to Claim 4, wherein the first corrective image (52) comprises a drift correction data (53b) arranged to correct for a movement of a projection of the output screen of the image intensifier on a projection means (18) during a rotational scan.

6. An X-ray examination apparatus (10) comprising an imaging system according to any one of the preceding Claims.

7. A method for reducing an artifact in a three-dimensional reconstructed volume comprising a plurality of planar images, said method comprising the steps of:
- processing the image (51) using a first corrective image (52) to eliminate a first source of structured noise in the image yielding a first-stage corrected image (53);
- processing the first-stage corrected image (53) with a second corrective image (54) to eliminate a second source of structured noise in the image.

8. A method according to Claim 7, wherein
- the first corrective image (52) comprises a first gain correction data (43), said first corrective image being constructed for a raw image of a gain calibration scan (41);
- the second corrective image (54) comprises a second gain correction data (45), said second corrective image being constructed for the raw image of the gain calibration scan (41) after it being processed by means of the first corrective image (52) and an unwarping function.

9. A method according to Claim 8, wherein:
- the first gain correction data (43) comprises a result of an averaging of a plurality of raw images of the gain calibration scan (41);
- the second gain correction data (45) comprises a result of an averaging of a plurality of raw images of the calibration object (41) after them being processed by means of the first corrective image (52) and an unwarping function.

10. A computer program (40) arranged to carry out the steps of the method according to any one of the preceding Claims 7 to 9.